Antibacterial Activity of Carvacrol Against Standard Strain of Listeria monocytogenes and Isolated Strain From Raw Milk in Iran

Sheida Akbari Shahabi[1]; Mehdi Asmar*[1]; Naser Ghaemi[1]; Mehdi Assmar[1]; Amir Massiha[1]; Naser Ghaemi[2]; Alireza Massiha[1]

1- Lahijan Branch, Islamic Azad Univercity ,Lahijan, Iran

2-Pardis, Biotechnology ,Tehran University, Tehran, Iran

sheidaakbari.shahabi@yahoo.com

Background & Objectives: Increased bacterial resistance to antibacterial agents is one of the most common problems in medicine.Herbal remedies used in the traditional medicine provide an interesting and unexplored source of essessing new drug. The purpose of this study was to determine antibacterial activity of carvacrol that were producted from leaves of *Satureja khuzestanica* against *Listeria monocytogenes*.

Methods: Listeria monocytogenes were isolated from row milk. Antibacterial activities were examined by agar dilution methods against Listeria monocytogenes. Minimum Inhibitory Concentration (MIC) or Minimum Bacterial Concentration (MBC) wascarried out by Micro Dilution Methods.

Result: Inhibition zones of carvacrol against standard strain were 60 mm; These zone for isolated strain were 50 mm. Antibacterial activity for ampicillin on standard and isolated strain was assessed by inhibition diameters to range 21, 18 mm.The minimum inhibitory concentrations of carvacrol against standard and isolated strain were 0.390 µg/ml and 1.562 µg/ml. MBC value of carvacrol against standard and isolated strain were 0.781 µg/ml and 3.125 µg/ml.

Conclusion: We conclude carvacrol is bactericide but ampicillin is bacteriostatic.

Keywords: Carvacrol; Antimicrobial Reactive; *Listeria monocytogenes*